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Patent
Attorney's Docket No. 024916-010

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of	
Pamela S. SOKOL et al.	Group Art Unit: Unassigned
Application No.: 09/988,019	Examiner: Unassigned
Filed: November 16, 2001	
For: CONSERVED METALLOPROTESE EPITOPES	

INFORMATION DISCLOSURE STATEMENT TRANSMITTAL LETTER

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Enclosed is an Information Disclosure Statement and accompanying form PTO-1449 for the above-identified patent application.

[X] No additional fee for submission of an IDS is required.

[ ] The fee of $180.00 (126) as set forth in 37 C.F.R. § 1.17(p) is also enclosed.

[ ] A certification under 37 C.F.R. § 1.97(e) is also enclosed.

[ ] A certification under 37 C.F.R. § 1.97(e), and the fee of $180.00 (126) as set forth in 37 C.F.R. § 1.17(p) are also enclosed.

[ ] Charge $_____ to Deposit Account No. 02-4800 for the fee due.

[ ] A check in the amount of $_____ is enclosed for the fee due.

The Commissioner is hereby authorized to charge any appropriate fees under 37 C.F.R. §§ 1.16, 1.17 and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 02-4800. This paper is submitted in duplicate.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

By: _____
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Date: February 11, 2002

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Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

In accordance with the duty of disclosure as set forth in 37 C.F.R. § 1.56, Applicants hereby submit the following information in conformance with 37 C.F.R. §§ 1.97 and 1.98. Pursuant to 37 C.F.R. § 1.98, a copy of each of the documents cited below were either submitted or cited in parent Application Serial No. 09/275,417, thus, these documents are not enclosed herewith.

U.S. PATENT DOCUMENTS

1. Hodges et al., U. S. Patent No. 5,445,318, issued August 29, 1995.

FOREIGN PATENT DOCUMENTS

1. Morihara et al., Japanese Patent No. 2104285, published April 17, 1990, with English language abstract.
2. De Leys et al., PCT Publication Number WO 93/18054, published September 16, 1993.

OTHER DOCUMENTS

1. WRETLAND et al., "*Pseudomonas aeruginose* Elastase and Its Role in Pseudomonas Infections," *Rev. Infect. Dis.*, 1983, pp. 998-1004, vol. 5(5), University of Chicago Press, Chicago, Ill.
2. HONG et al., "Effect of *Pseudomonas aeruginosa* Elastase and Alkaline Protease on Serum Complement and Isolated Components C1q and C3[1]," *Clinical Immunology and Immunopathology*, 1992, pp. 133-38, vol. 62(2), Academic Press, Orlando, Florida.
3. HORVAT et al., "*Pseudomonas aeruginosa* Alkaline Protease Degrades Human Gamma Interferon and Inhibits Its Bioactivity," *Infection and Immunity*, 1988, pp. 2925-32, vol. 56(11), American Society for Microbiology, Washington, D.C.

4. KESSLER et al., "Secreted LasA of *Pseudomonas aeruginosa* Is a Staphylolytic Protease," *The Journal of Biological Chemistry*, 1993, pp. 2503-08, vol. 268(10), John Wiley & Sons, New York, New York.

5. OLSON et al., "Efficient Production and Processing of Elastase and LasA by *Pseudomonas aeruginosa* Require Zinc and Calcium Ions," 1992, pp. 4140-47, vol. 174(12), American Society for Microbiologists, Washington, D.C.

6. TODER et al., "*lasA* and *lasB* Genes of *Pseudomonas aeruginosa*: Analysis of Transcription and Gene Product Activity," *Infection and Immunity*, 1994, pp. 1320-27, vol. 62(4), American Society for Microbiology, Washington, D.C.

7. KOOI et al., "Neutralizing Monoclonal Antibodies to an Extracellular *Pseudomonas cepacia* Protease", *Infection and Immunity*, 1994, pp. 2811-17, vol. 62(7), American Society for Microbiology, Washington, D.C.

8. BEVER et al., "Molecular Characterization and Nucleotide Sequence of the *Pseudomonas aeruginosa* Elastase Structural Gene," *Journal of Bacteriology*, 1988, pp. 4309-14, vol.

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9. TOWBIN et al., "Electrophoretic transfer of proteins from polyacrylamide gels to nitrocellulose sheets: Procedure and some applications." *Proc. Natl. Acad. Sci.*, 1979, pp. 4350-54, vol. 76, no. 9, The National Academy of Sciences, Washington, D.C.

10. BOOTH et al, "Vibrio *cholerae* Soluble Hemagglutinin/ Protease Is a Metalloenzyme," *Infect. Immun.*, 1983, pp. 639-44, vol. 42, no. 2, American Society for Microbiology, Washington, D.C.

11. FINKELSTEIN et al., "*Vibrio cholerae* hemagglutinin/lectin/ protease hydrolyzes fibronectin and ovomucin: F.M. Burnet revisited," *Proc. Natl. Acad. Sci.*, 1983, pp. 1092-95, vol. 80, The National Academy of Sciences, Washington, D.C.

12. HÄSE et al., "Comparison of the *Vibrio cholerae* Hemagglutinin/Protease and the *Pseudomonas aeruginosa* Elastase," *Infection and Immunity*, 1990, pp. 4011-15, vol. 58, no. 12, American Society for Microbiology, Washington, D.C.

13. HÄSE et al., "Cloning and Nucleotide Sequence of the *Vibrio cholerae* Hemagglutinin/Protease (HA/Protease) Gene and Construction of an HA/Protease-Negative Strain," *Journal of Bacteriology*, 1991, pp. 3311-17, vol. 172, no. 11, American Society for Microbiology, Washington, D.C.

14. HÄSE et al., "Bacterial Extracellular Zinc-Containing Metalloproteases," *Microbiological Reviews*, 1993, pp. 823-37, vol. 57, no. 4, American Society for Microbiology, Washington, D.C.

15. GILLIGAN et al., "Microbiology of Airway Disease in patients with Cystic Fibrosis," *Clinical Microbiology Reviews*, 1991, pp. 35-51, vol. 4, no. 1, American Society for Microbiology, Washington, D.C.

16. PEQUES et al., "Outbreak of *Pseudomonas cepacia* Bacteremia in Oncology Patients," *Clin. Infect. Dis.*, 1993, pp. 407-11, vol. 16, University of Chicago Press, Chicago, IL.

17. TAYLOR et al., "Pseudomonas cepacia: pulmonary infection in patients with cystic fibrosis," *Respiratory Medicine*, 1993, pp. 187-92, vol. 87, Highwire Press, Palo Alto, CA.

18. MCKEVITT et al., "Characterization of *Pseudomonas cepacia* Isolates from Patients with Cystic Fibrosis," 1984, pp. 291-93, vol. 19, no. 2, American Society for Microbiology, Washington, D.C.

19. MCKEVITT et al., "Purification and Characterization of an Extracellular Protease from *Pseudomonas cepacia*," *Infection and Immunity*, 1989, pp. 771-78, vol. 57, no. 3, American Society for Microbiology, Washington, D.C.

20. FICK et al., "IgG Proteolytic Activity of *Pseudomonas aeruginosa* in Cystic Fibrosis," *The Journal of Infectious Diseases*, 1985, pp. 589-98, vol. 151, no. 4, University of Chicago Press, Chicago, IL.

21. BAINBRIDGE et al., "Functional importance of cystic fibrosis immunoglobulin G fragments generated by *Pseudomonas aeruginosa* elastase," *J. Clin. Lab. Med.*, 1989, pp. 728-33, vol. 114, Essevier Science, New York, New York.

22. HORVAT et al., "Inactivation of Human Gamma Interferon by *Pseudomonas aeruginosa* Proteases: Elastase Augments the Effects of Alkaline Protease Despite the Presence of α_2-

Macroglobulin," *Infection and Immunity*, 1989, pp. 1668-74, vol. 57, American Society for Microbiology, Washington, D.C.

23. KLINGER et al., "Antibodies to Proteases and Exotoxin A of *Pseudomonas aeruginosa* in Patients with Cystic Fibrosis: Demonstration by Radioimmunoassay," *The Journal of Infectious Diseases*, 1978, pp. 49-58, vol. 138, no. 1, University of Chicago Press, Chicago, IL.

24. JAGGAR et al., "Detection by Enzyme-Linked Immunosorbent Assays of Antibody Specific for *Pseudomonas* Proteases and Exotoxin A in Sera from Cystic Fibrosis Patients," *Journal of Clinical Microbiology*, 1982, pp. 1054-58, vol. 15, no. 6, American Society for Microbiology, Washington, D.C.

25. DÖRING et al., "Proteases of *Pseudomonas aeruginosa* in Patients with Cystic Fibrosis," *The Journal of Infectious Diseases*, 1983, pp. 744-50, vol. 147, no. 4, University of Chicago Press, Chicago, IL.

26. HOLLSING et al., "Prospective Study of Serum Antibodies to *Pseudomonas aeruginosa* Exoproteins in Cystic Fibrosis,"

Journal of Clinical Microbiology, 1987, pp. 1868-74, vol. 25, no. 10, American Society for Microbiology, Washington, D.C.

27. GRANSTROM et al., "Relation between Antibody Response to *Pseudomonas aeruginosa* Exoproteins and Colonization/ Infection in Patients with Cystic Fibrosis," *Acta. Paediatr. Scand.*, 1984, pp. 772-77, vol. 73, .

28. JONGENEEL et al., "A unique signature identifies a family of zinc-dependent metallopeptidases," *FEBS Lett.*, 1989, pp 211-14, vol. 242, no. 2, Federal of European Biochemical Societies - Blackwell Science, Oxford, UK.

29. KOOI et al., "Differentiation of thermolysins and serralysins by monoclonal antibodies," *J. Med. Microbiol.*, 1996, pp. 219-25, vol. 45, Springer-Verlage, Heidelberg, Germany.

30. THAYER et al., "Three-Dimensional Structure of the Elastase of *Pseudomonas aeruginosa* at 1.5-Å Resolution," *The Journal of Biological Chemistry*, John Wiley & Sons, New York, New York.

31. PIR 60 Alignment with HYBSPA (1990).

32. LI et al., "β-Endorphin omission analogs: Dissociation of immunoreactivity from other biological activities," *Proc. Natl. Acad. Sci.*, 1980, pp. 3211-14, vol. 77, no. 6, National Academy of Sciences, Washington, D.C.

33. ZURAWSKI et al., "Alterations in the Amino-terminal third of Mouse Inteleukin 2: Effects on Biological Activity and Immunoreactivity," *The Journal of Immunology*, 1986, pp. 3354-60, vol. 137, vol. 10, American Association of Immunologists, Bethesda, Maryland.

34. SKOLNICK et al., "From genes to protein structure and function: novel applications of computational approaches in the genomic era,", *Trends in Biotech.*, 2000, pp. 34-39, vol. 18, no. 1, Elsevier Science, New York, New York.

To assist the Examiner, the documents are listed on the attached form PTO-1449. It is respectfully requested that an Examiner initialed copy of this form be returned to the undersigned.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

By: _____
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Date: February 11, 2002

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PATENT & TRADEMARK OFFICE

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

ATTORNEY'S DKT NO.	APPLICATION NO.
024916-010	09/988,019
APPLICANT	
Pamela A. SOKOL et al.	
FILING DATE	GROUP
Novemb r 16, 2001	Unassign d

U.S. PATENT DOCUMENTS

Examiner Initials	U.S. Patent Document Number	Kind Code (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication (MM-DD-YYYY)
	5,445,318	A	HODGES et al.	08-29-1995

FOREIGN PATENT DOCUMENTS

Examiner Initials	Foreign Patent Document Number	Kind Code (if known)	Country	Date of Publication (MM-DD-YYYY)	Translation Yes	Translation no
	2104285		Japan	04-17-1990		
	93/18054	A2	WO	09-16-1993		

NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Include name of author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	WRETLAND et al., "*Pseudomonas aeruginose* Elastase and Its Role in Pseudomonas Infections, *Rev. Infect. Dis.*, 1983, pp. 998-1004, vol. 5(5), University of Chicago Press, Chicago, Ill.
	HONG et al., "Effect of *Pseudomonas aeruginosa* Elastase and Alkaline Protease on Serum Complement and Isolated Components C1q and C3[1]," *Clinical Immunology and Immunopathology*, 1992, pp. 133-38, vol. 62(2), Academic Press, Orlando, Florida.
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	TODER et al., "*lasA* and *lasB* Genes of Pseudomonas aeruginosa: Analysis of Transcription and Gene Product Activity," *Infection and Immunity*, 1994, pp. 1320-27, vol. 62(4), American Society for Microbiology, Washington, D.C.
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	FINKELSTEIN et al., "*Vibrio cholerae* hemagglutinin/lectin/protease hydrolyzes fibronectin and ovomucin: F.M. Burnet revisited," *Proc. Natl. Acad. Sci.*, 1983, pp. 1092-95, vol. 80, The National Academy of Sciences, Washington, D.C.
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APPLICANT: Pamela A. SOKOL et al.	
FILING DATE: November 16, 2001	GROUP: Unassign d

	GILLIGAN et al., "Microbiology of Airway Disease in patients with Cystic Fibrosis," *Clinical Microbiology Reviews*, 1991, pp. 35-51, vol. 4, no. 1, American Society for Microbiology, Washington, D.C.
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	BAINBRIDGE et al., "Functional importance of cystic fibrosis immunoglobulin G fragments generated by *Pseudomonas aeruginosa* elastase," *J. Clin. Lab. Med.*, 1989, pp. 728-33, vol. 114.
	HORVAT et al., "Inactivation of Human Gamma Interferon by *Pseudomonas aeruginosa* Proteases: Elastase Augments the Effects of Alkaline Protease Despite the Presence of α_2-Macroglobulin," *Infection and Immunity*, 1989, pp. 1668-74, vol. 57, American Society for Microbiology, Washington, D.C.
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Examiner Signature		Date Considered	

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